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The Preliminary Report of the Association Commission on the Organization of the College Curriculum

Edited by

Robert L. Kelly

Executive Secretary of the Association

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INTRODUCTORY STATEMENT

By PRESIDENT LOUGH.

That I make this brief preliminary statement is authorized by the entire Commission, but the responsibility for what I say is my own. The responsibility is not a serious one, for I am satisfied that I state what is manifest to everyone.

My purpose is to state as briefly and as definitely as conditions permit what seem to me the main considerations with which we must reckon as we approach the problem of the reorganization of the College Curriculum.

Is the demand sufficient and does it come from sources worthy to justify any serious attempt to reorganize?

It seems to me that the most serious demand, the most intelligent demand, comes from the educators themselves. That need not be discussed. The demand comes, as we know, perhaps better than any other class of citizens, from the interest and the interests of students. It comes from a variety of interests looking for prepared workmen. This variety includes every phase of activity. We have been brought face to face in various ways with not only the demand but the severe criticism that is embodied in this demand. Probably the great majority of us will grant that while all that is demanded from these sources cannot be approved, there is much that is just and compelling consideration. In any effort to comply with this demand, edu-

cators will have serious regard for principles and values as discovered and tested in educational experience. In this experience I would include the agonies of the present.

Our comprehensive aim is the cultured and efficient citizen. Neither without the other is adequate. Culture that does not issue in efficiency is fragmentary and lacking in vitality, and efficiency that does not rest upon culture is defective, mechanical, lacking dynamic. If we develop the student in culture, we must direct him in reliving the experience of mankind in which excellence has been discovered and the power to perceive and relish has been developed. To make him efficient we must use the same tools and agencies with which he is developed in culture. He is cultured as he has delightful insight into nature. He is efficient as he can make this same nature do his bidding, serve his interests. Is not the whole aim of education the cultured and efficient citizen? This is held to include taste, discipline, practical or useful knowledge and skill, extensive range of interest and interests, and the adjustment of culture and efficiency to local social and industrial conditions. Beyond a doubt many of our colleges flagrantly neglect this demand of social and industrial conditions. We must give more heed to it, but in doing so we must retain the good of the old curriculum.

Our experience with the elective system has raised a question which we must seriously consider in reorganization of the curriculum. What weight are we to give to students' desires and efforts to avoid solid work as compared with educational standards? I know of but one reply. We must seriously weigh and carefully appraise the value of the students' desires. Have we, up to date, made adequate provision to protect students against their own ignorance and weakness? Everybody knows we have not. So far provision is fragmentary and actually almost if not quite non-existent in many colleges. A beginning has been made in vocational guidance. This, however, is by no means universal. Should we not change the phrase to cultural and vocational guidance? Certainly neither may be neglected

with impunity. This means, necessarily, provision for diagnosis and counsel in much improved form as compared with anything now being done. Experience has demonstrated that group requirements and model courses may be made distinctly serviceable.

The condition in which freshmen come to the college has forced upon us the consideration of another troublesome question. How shall we provide for the freshman prepared for advanced courses in certain departments and for the freshman not prepared. I have in mind more especially the conditions we must reckon with in the West and Middle West. We must receive as unconditional freshmen those who come from the high schools with fifteen units of accredited work. They are coming to college without having had certain courses in language, in mathematics, and very often in science. When they come to the college they often decide that they should have some of these courses. If they get them they must get them as college courses. For one, I believe that we cannot go back to the old conditions. We must face and try to solve this problem as a new problem that is forced upon us. So I ask: To what extent can we continue to hold to rigid entrance requirements? I have already expressed my own view. We cannot do it, although we can hold to much of value in the old requirements. Are we not obliged to consider the problem of offering beginning courses of college dignity and strength? If this is done, it should be as prominently advertised as other provisions.

Would it not be well for this association to work out and strongly commend something definite and wholesome on the vexed problem of the relation of quality and quantity in offering and execution? We all most heartily assent to such utterances as we heard from President Angell last night. Where are the embarrassments and how can we successfully meet them? Are they not in part due to our national blunder of appreciating quantity above quality? Larger and materially stronger institutions must take large responsibility for the tendency of the small college to attempt quantity at the expense of quality. I refer to the

contempt often expressed for the small college because of the limited curriculum offered. We need constant emphasis upon the wisdom of limited offerings well executed. We must aim at quality in the efficient college before quantity.

In attempting to solve the problem just referred to, we must have a definite reply to another question. What principle is to guide the small college of limited means in its offerings as compared with the large college of extensive means? There can be no difference of opinion as to the answer. What we offer must be done just as well as it can be done in any larger and more extensively equipped institution. Our efforts should be as stated so forcibly by President Angell last evening, to do what we offer to do with fine quality rather than to yield to the constant temptation for the showing in quantity, to offer what we know we cannot do.

Should a small college like my own, Baker University, having an enrollment of from 450 to 500 students and a faculty of 30 full time teachers, offer graduate courses? Should it yield to the constant appeal for correspondence work? While we have a faculty which in ability could give fine graduate work, for many of them have come from positions in the larger institutions where they did it, all their time, and all their energy are consumed in doing the undergraduate work. We would be happy if we had more in our faculty to do the undergraduate work. We take the position that no graduate work should be offered, and certainly no attempt at correspondence should be made. We inform our students, those that ask for either graduate or correspondence courses, that they must go elsewhere. A strong utterance in this matter of quality as over against quantity, definitely made by this Association, would wonderfully help all institutions that are eager to meet in a fair and proper way this condition.

COLLEGE ENTRANCE REQUIREMENTS

By DR. FURST.

After such a handsome introduction from the President, I wonder if you will indulge me with a postscript which has nothing whatever to do with the subject which has been assigned to me for this morning?

Two years ago it was my privilege to draw up for this Association a rather elaborate memorandum concerning the history and development and probable outcome of the problem of providing retiring allowances for teachers in universities and colleges. That was printed in the Bulletin of the Association and distributed in anticipation of the discussion of the subject at your meeting two years ago, following an address by Dr. Pritchett, the President of the Carnegie Foundation.

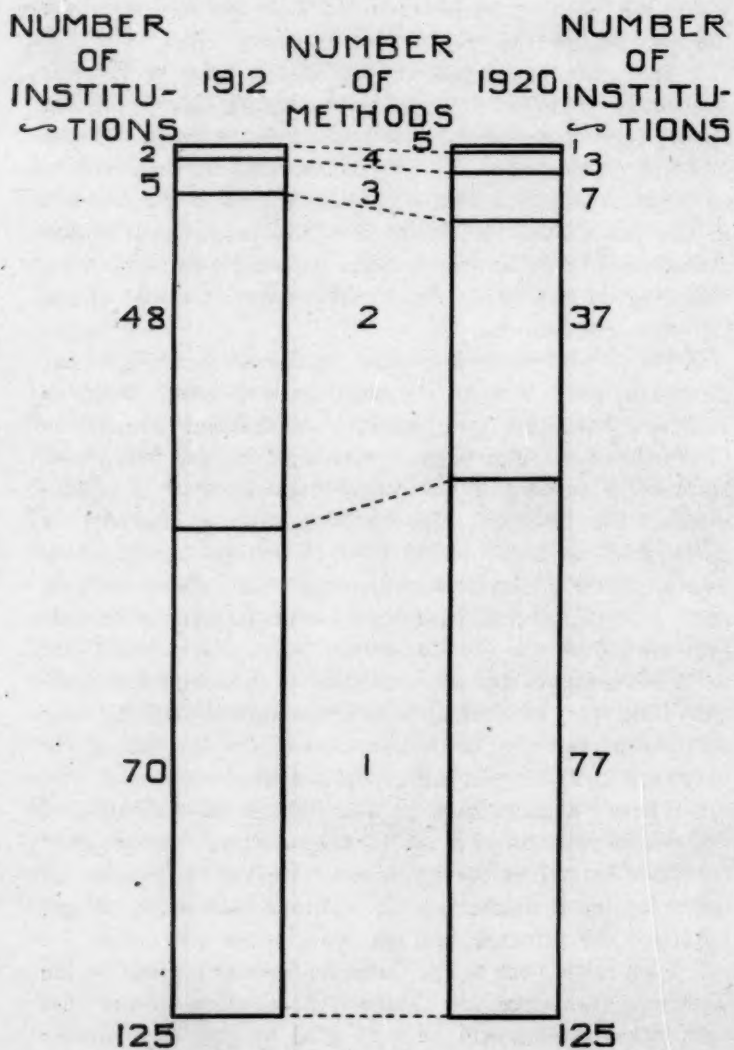
Those who were interested in that Bulletin and that discussion will, I think, be interested to know that the Teachers Insurance and Annuity Association which was then formed has now been in operation for two full years. Its work is meeting an acceptance that indicates its adjustment to the problem. Having done twice as much work during 1920 as it did during 1919, the Association has now written 1,200 contracts representing about eleven million dollars. One-third of these represent about three and a half million dollars of life insurance, especially devised for teachers in forms that are provided by no commercial company; the other two-thirds represent annuities totalling over \$600,000 a year. All of the contracts of the Association are written at cost, without charge for overhead expenses.

These contracts have been written in 224 institutions, and 46 institutions have adopted contractual, contributory annuities for all of their teachers who are interested. A dozen or more institutions in addition have adopted and approved the principle and are working on the details.

I am asked both by the Carnegie Foundation and by the Teachers Insurance and Annuity Association to say that both organizations will be very glad to give any further

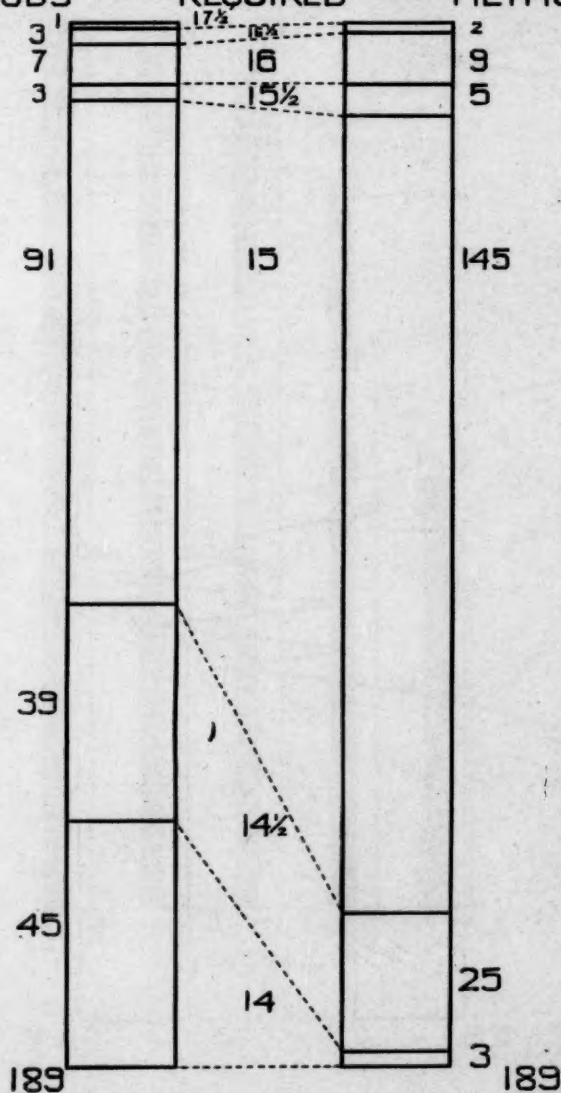
(See pages 22-31.)

NUMBER OF METHODS - I OF ADMISSION.



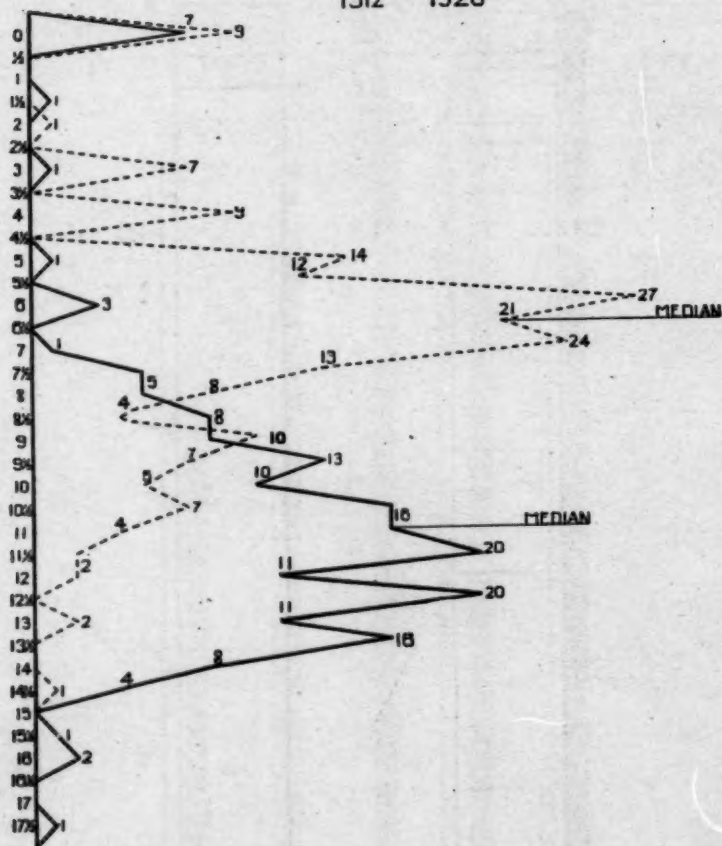
NUMBER OF UNITS REQUIRED-II

NUMBER OF METHODS 1912 NUMBER OF UNITS REQUIRED 1920 NUMBER OF METHODS



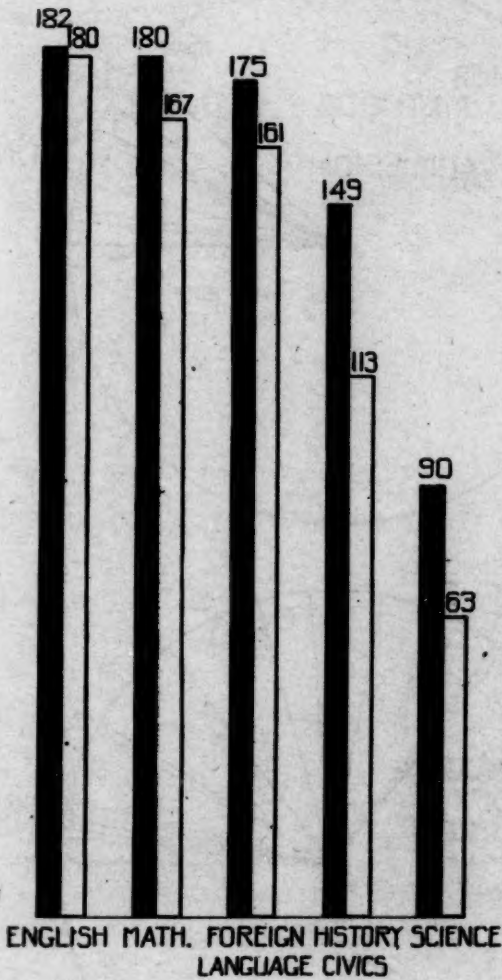
UNITS PRESCRIBED-III

1912-1920---

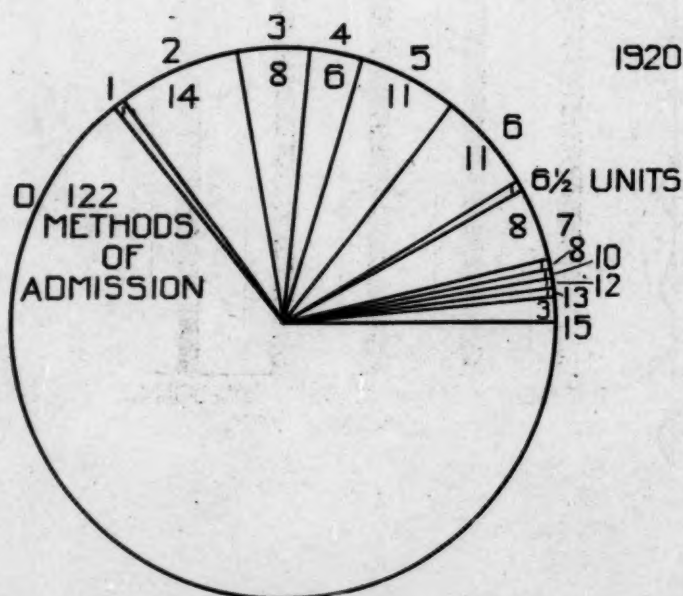
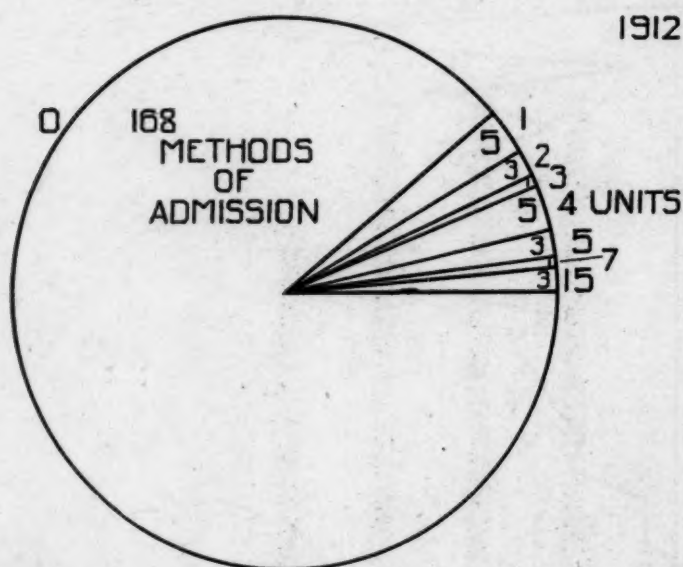


AMERICAN COLLEGES

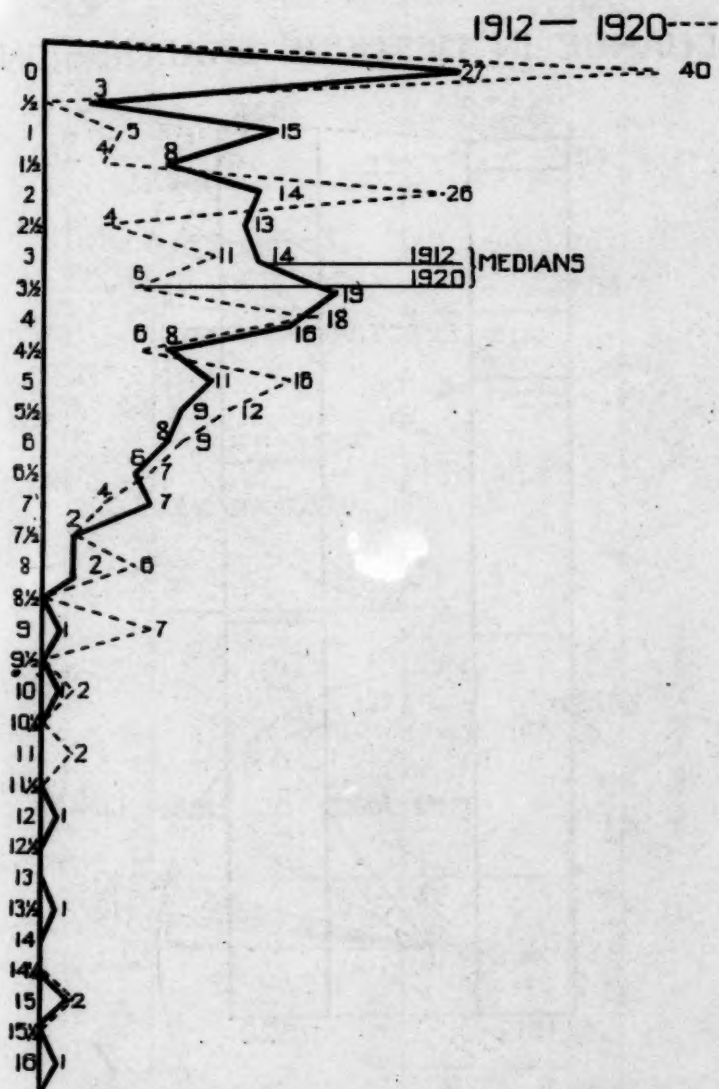
NUMBER OF PRESCRIPTIONS IN VARIOUS GROUPS
IN 1912 ■ - IN 1920 □ IV



NUMBER OF FREE UNITS.V

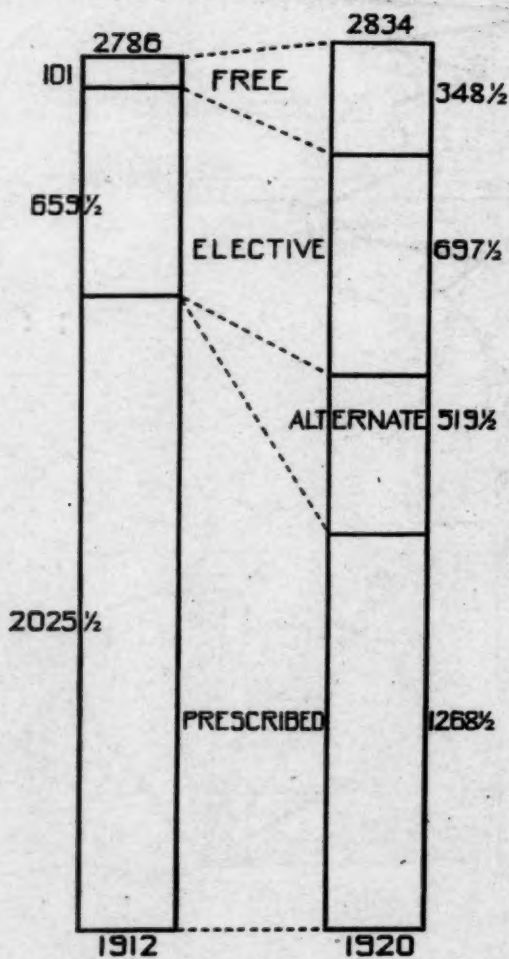


ELECTIVE UNITS.-VI



CHANGE IN METHODS OF ADMISSION

VII



ALTERNATE PRESCRIPTIONS: VIII

GK/LAT 2 206 2 1157 2 MATH 5 PHYSICS 37 CHEM 36 BOT 11 ZOO 11 PHYSIOG 6 PHYSIO 6 GEOL 3	GREEK 61		GREEK 65	LAT 46	GK 4		
	LATIN 46						
	LATIN 16						
	FRENCH 82		FRENCH 48				
	GERMAN 82			GERMAN 48			
	SPANISH 77		SPANISH 39				
	ITALIAN 8			FR 10			
	HISTORY 10		GER 10				
	ITAL 6			SPAN 10			
	MATH 10						
1		2		3		4	
UNITS							

COMPREHENSIVE EXAMINATIONS-IX

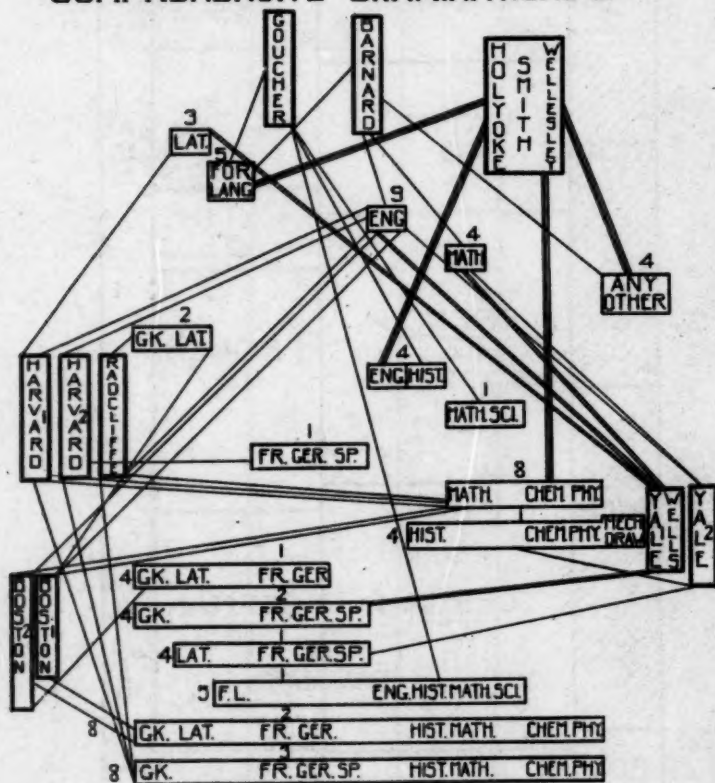


TABLE A
REQUIREMENTS FOR ADMISSION IN 1912 AND 1920

No. of Units	Prescribed				Elective				Free				Alternative Prescribed				Total			
	1912		1920		1912		1920		1912		1920		1912		1920		1912		1920	
	Meth- ods	Units	Meth- ods	Units	Meth- ods	Units	Meth- ods	Units	Meth- ods	Units	Meth- ods	Units	Meth- ods	Units	Meth- ods	Units	Meth- ods	Units	Meth- ods	Units
0	7	0	9	0	27	0	40	0	168	0	122	0	0	0	33	0	202	0	204	0
1	0	0	0	0	3	1½	0	0	5	0	0	0	0	0	0	0	3	1½	0	0
1½	0	0	0	0	15	15	5	5	5	0	1	1	0	0	2	2	20	20	8	8
2	1	1½	0	0	8	12	4	6	0	0	0	0	0	0	0	0	9	13½	4	6
2½	0	0	1	2	14	28	26	52	3	6	14	28	0	0	53	106	17	34	94	188
3	0	0	0	0	13	32½	4	10	0	0	0	0	0	0	1	2½	32½	13	5	12½
3½	1	3	7	21	14	42	11	33	1	3	8	24	0	0	32	96	16	48	58	144
4	0	0	0	0	19	66½	6	21	0	0	0	0	0	0	0	0	19	66½	6	21
4½	0	0	9	36	16	64	18	72	5	20	6	24	0	0	36	144	21	84	69	276
5	0	0	0	0	8	36	6	27	0	0	0	0	0	0	0	0	8	36	6	27
5½	1	5	14	70	11	55	16	80	3	15	11	55	0	0	23	115	15	75	64	320
6	0	0	12	66	9	49½	12	66	0	0	0	0	0	0	0	0	9	49½	24	132
6½	3	18	27	162	8	48	9	54	0	0	11	66	0	0	9	54	11	66	56	336
7	0	0	21	136½	6	39	7	45½	0	0	0	0	0	0	0	0	6	39	29	188½
7½	1	7	24	168	7	49	4	28	1	7	8	56	0	0	0	0	7	52½	36	252
8	5	37½	13	97½	2	15	2	15	0	0	0	0	0	0	0	0	7	52½	15	112½
8½	5	40	8	64	2	16	6	48	0	0	0	8	0	0	0	0	7	56	15	120
9	8	68	4	34	0	0	0	0	0	0	0	0	0	0	0	0	8	68	4	34
9½	8	72	10	90	1	9	7	63	0	0	0	0	0	0	0	0	9	81	17	153
10	13	123½	7	66½	0	0	0	0	0	0	0	0	0	0	0	0	13	123½	7	66½
10½	10	100	5	50	1	10	2	20	0	0	0	10	0	0	0	0	11	110	8	80
11	16	168	7	73½	0	0	0	0	0	0	0	0	0	0	0	0	16	168	7	73½
11½	11	16	176	4	44	0	0	22	0	0	0	0	0	0	0	0	16	176	6	66
12	20	280	2	23	0	0	0	0	0	0	1	12	0	0	0	0	20	280	2	23
12½	20	250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	144	3	36
13	11	143	2	26	0	0	0	0	0	0	0	0	0	0	0	0	20	250	0	0
13½	16	216	0	0	0	0	0	0	0	0	1	13	0	0	0	0	11	143	3	39
14	8	112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	229½	0	0
14½	4	58	1	14½	0	0	0	0	0	0	0	0	0	0	0	0	8	112	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	58	1	14½
15½	1	15½	0	0	2	30	2	30	3	45	3	45	0	0	0	0	5	75	5	75
16	2	32	0	0	1	16	0	0	0	0	0	0	0	0	0	0	1	15½	0	0
16½	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	48	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17½	1	17½	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	189	2025½	189	1268½	189	650½	189	697½	189	101	189	348½	0	0	189	519½	567	2786	756	2834

ASSOCIATION OF

TABLE B
SUBJECTS PRESCRIBED IN 1912, 1920

Number of Units	English		Mathe- matics		Foreign Language		History		Science	
	1912	1920	1912	1920	1912	1920	1912	1920	1912	1920
$\frac{1}{2}$	0	0	0	0	0	0	3	2	7	0
1	0	0	0	1	1	0	118	101	56	50
$1\frac{1}{2}$	1	0	0	0	0	0	5	2	5	0
2	7	8	34	52	35	62	23	8	22	12
$2\frac{1}{2}$	0	3	106	70	1	0	0	0	0	0
3	170	168	35	41	19	23	0	0	0	1
$3\frac{1}{2}$	0	0	2	1	2	0	0	0	0	0
4	4	1	3	2	49	34	0	0	0	0
$4\frac{1}{2}$	0	0	0	0	1	0	0	0	0	0
5	0	0	0	0	15	17	0	0	0	0
$5\frac{1}{2}$	0	0	0	0	3	0	0	0	0	0
6	0	0	0	0	29	16	0	0	0	0
$6\frac{1}{2}$	0	0	0	0	2	0	0	0	0	0
7	0	0	0	0	16	7	0	0	0	0
$7\frac{1}{2}$	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	1	2	0	0	0	0
$8\frac{1}{2}$	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0
$9\frac{1}{2}$	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	1	0	0	0	0	0
Totals	182	180	180	167	175	161	149	113	90	63

TABLE D
ALTERNATE PRESCRIPTIONS, 1920

Subjects	Number of Units							Total
	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	4	
French.....	0	0	0	82	0	48	10	140
German.....	0	0	0	82	0	48	10	140
Greek.....	0	1	0	61	0	65	4	131
Spanish.....	0	0	0	77	0	39	10	126
Latin.....	0	2	0	46	0	16	46	110
Physics.....	0	37	0	0	0	0	0	37
Chemistry.....	0	36	0	0	0	0	0	36
History.....	1	7	1	10	1	2	0	22
Mathematics.....	0	5	1	3	0	10	0	19
Italian.....	0	0	0	6	0	8	0	14
Botany.....	1	11	0	0	0	0	0	12
Zoology.....	1	11	0	0	0	0	0	12
English.....	0	3	0	0	0	5	0	8
Physiography.....	1	6	0	0	0	0	0	7
Physiology.....	2	4	0	0	0	0	0	6
Geology.....	1	3	0	0	0	0	0	4
Astronomy.....	2	0	0	0	0	0	0	2
TOTALS (17 Subjects)	9	126	2	367	1	241	80	826

TABLE C
SUBJECTS ELECTIVE IN 1912 AND 1920

Number of Units	1½		1		1½		2		2½		3		3½		4		4½		5		5½		Total	
	1912	1920	1912	1920	1912	1920	1912	1920	1912	1920	1912	1920	1912	1920	1912	1920	1912	1920	1912	1920	1912	1920	1912	1920
English.....	0	0	0	52	0	0	0	0	0	0	0	100	0	0	80	5	0	0	0	0	0	0	189	66
History, Civics.....	0	28	6	27	5	1	44	32	11	3	34	36	17	3	37	38	10	2	6	5	19	0	189	175
Mathematics.....	0	12	0	33	0	45	1	24	16	8	29	4	50	2	67	5	8	1	18	1	0	0	189	135
Latin.....	0	0	1	10	0	0	2	20	1	0	4	2	1	0	152	86	1	0	26	1	0	0	188	119
French.....	0	0	1	1	1	0	33	25	0	0	93	62	0	0	54	46	0	0	2	0	0	0	184	134
German.....	0	0	1	1	1	0	24	28	0	0	92	62	0	0	64	46	0	0	2	0	0	0	184	137
Physics.....	3	1	152	132	1	1	25	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	181	142
Greek.....	0	0	3	3	0	0	22	26	2	0	114	88	0	0	36	7	0	0	2	0	0	0	179	124
Chemistry.....	3	1	148	133	1	1	26	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	178	143
Botany.....	22	8	120	99	0	0	22	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	164	111
Zoology.....	18	7	116	85	0	1	22	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	156	95
Physiography.....	32	10	101	91	0	1	20	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	153	105
Physiology.....	70	34	47	33	0	0	21	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	138	70
Drawing.....	19	4	67	41	5	4	12	19	0	0	0	0	3	0	0	23	3	0	0	0	0	0	126	74
Spanish.....	0	0	5	1	2	0	69	55	0	0	11	39	0	0	23	18	0	0	0	0	0	0	110	113
Biological.....	0	1	14	59	70	3	0	2	20	0	0	0	0	0	0	0	0	0	0	0	0	0	104	65
Agriculture.....	17	4	23	15	0	0	7	10	0	0	21	7	1	0	2	10	0	0	0	0	0	0	71	46
Business.....	18	4	10	8	4	0	9	13	0	2	26	4	2	4	1	12	0	1	0	3	0	0	71	51
Economics.....	36	21	18	12	0	0	0	0	0	0	9	0	1	0	0	0	0	0	0	0	0	0	64	33
Home Economics.....	11	0	17	9	0	0	12	20	0	0	20	4	0	0	3	8	0	0	0	0	0	0	63	41
Geology.....	18	12	25	13	0	0	0	19	2	0	0	0	0	0	0	0	0	0	0	0	0	0	62	27
Astronomy.....	20	4	25	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45	8
General Science.....	11	4	28	29	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	39	35
Education.....	5	2	7	1	0	0	1	1	0	0	0	4	1	0	0	1	0	0	0	0	0	0	13	6
Italian.....	0	0	0	5	0	0	8	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	6
Bible.....	2	0	8	5	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
Psychology.....	1	5	8	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Nature Study.....	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Surveying.....	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Danish.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Icelandic.....	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Scandinavian.....	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	0	0	0	0	0	0	1	3
Swedish.....	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
Norwegian.....	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3	3
Art.....	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Hebrew.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Argument & Debat.....	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Polish.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
Vocational Subjects.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1

information to anyone who is interested, either by correspondence, or, by conference, at their offices, in the Guaranty Trust Company Building, at 44th Street and Fifth Avenue, where it might be interesting to you to see the machinery in actual operation.

The part of the work of the Commission on the College Curriculum that was assigned to me was a statement of the actual situation and the apparent tendencies in the field of college entrance requirements.

You will recall the very comprehensive study of that subject which was published in 1913 by Mr. Clarence Kingsley, now connected with the State Board of Education of Massachusetts, in which he studied the entrance requirements of 204 colleges of liberal arts, and presented the tendencies that seemed to be apparent as represented by those requirements.*

Quite recently, when the memoranda that I shall present to you were nearly finished, there came from the Bureau of Education a completed study that has long been in progress and that may possibly have not yet reached you—Dr. Walton C. John's Bulletin on Requirements for the Bachelor's Degree.** This represents the situation in 1916-17. Because of that fact, and because of its coming when our own study had been nearly completed, only incidental reference to this bulletin, as monumental as it is, is made here. We hope later to relate the facts contained there to the other studies that we have made.

Meanwhile, for purposes of comparison, we adopted a list of institutions, the entrance requirements of which could be studied both as they were in the past and as they are at present. It proved convenient for a number of reasons to use the 125 institutions that were on the approved list of the Association of American Universities for 1918, not including the institutions on that list that give only technical degrees. The data for the entrance requirements of these

*United States Bureau of Education, Bulletin, 1913, No. 7.

**United States Bureau of Education, Bulletin, 1920. No. 7.

institutions as they were in 1912 have been taken from Mr. Kingsley's Bulletin. For 1920 a group of members of the staff of the Carnegie Foundation made elaborate tables, giving all of the essential details.***

There are a hundred aspects of entrance requirements, and it was possible to study in detail only perhaps one dozen of them, and these are presented with the hope of some questions afterwards, either with regard to the significance of these details, or with regard to the significance of other factors that should be studied.

Chart I illustrates the number of methods of admission used by the 125 institutions. Many institutions grant two, three, four, or more degrees. Sometimes one requirement for entrance admits to candidacy for all degrees. Again, the requirements for admission vary with the degrees. In 1912 it was already the custom of a predominant number of institutions—70 out of 125—to have only one method or only one kind of requirement for admission to all of their degrees, no matter how many those degrees might be. This tendency became somewhat more striking in 1921, the number increasing from 70 to 77.

There was in 1912, and there still is in 1920, a small group of institutions that show a tendency toward differentiation. There were seven that had three or four methods of admission in 1912, and there are now eleven that have three or four or five methods. The tendency to differentiation is thus in a small and rather active minority, but the general tendency was then toward one method only, and now is even more strongly toward one method only. The number having more than two methods increased from seven to eleven, the number having two methods decreased

***The tables, few of which are presented here, were the work chiefly of Miss Margaret Herod. The computations were checked and a number of the charts were devised by Miss Edythe Maslen. Mr. Robert Reaser devised other of the charts and drew them all. It was my own fortune to suggest the plan of the study and of its various parts, and to summarize its particulars and general conclusions.

from 48 to 37, and the number having one method only has increased from 70 to 77.

There is an even more striking tendency toward uniformity in the number of units that are required for entrance to degrees in these 125 institutions. Chart II shows that in 1912, out of the 189 methods of admission which these 125 institutions had, 91, or not quite one-half, required fifteen units for admission. Curiously enough, the same 125 institutions in 1920 have again 189 methods of admission. In 1920, however, 145, or more than three-quarters of the methods of admission, require fifteen units.

During this period then, the group requiring fifteen units for admission has increased from nearly one-half to more than three-fourths of the whole. The tendency to have fourteen units has almost vanished, being reduced from 45 methods in 1912 to three in 1920. The tendency to have fourteen and a half units has similarly declined from 39 to 25.

The small group of institutions that was noticed in Chart I as retaining differentiated requirements for the different degrees appears in Chart II as requiring fifteen and a half, sixteen, sixteen and a half, and seventeen and a half units for admission. There were fourteen such methods of admission in 1912, and sixteen in 1920. The general tendency, however, to have fifteen units has become almost universal.

With regard to the distribution of these units, among prescriptions, electives, and entirely free choice on the part of the student, Table A and Chart III display another interesting tendency of which most of us have been aware. The solid black lines upon Chart III represent, for 1912, the number of units in the various admission requirements, which were definitely prescribed as to subject,—that is to say, requiring specifically so many units in history, English, chemistry, or some other particular subject. The dotted line represents the same factors in 1920. The lines indicating the medians denote that in 1912 it was the general custom that about eleven units should be taken in specified sub-

jects. In 1920 it was the practice to prescribe only about six and one-half of the fifteen units that were generally required for admission. In other words, the number of units that are ordinarily prescribed as to subject has decreased from eleven to six and a half, a decrease of nearly fifty per cent.

Table B and Chart IV indicate that the change has occurred in all subjects. The relative importance given to the various subjects is the same in 1912 as in 1920. Thus English, which was prescribed 182 times in 1912, is now prescribed 180 times. The most popular subject, therefore, has shown only a very slight decrease in the number of prescriptions. Mathematics shows a decline from 180 prescriptions in 1912 to 167 in 1920. All of the separate foreign languages, gathered here into one group, declined in prescriptions from 175 to 161. History and civics declined from 149 to 113. All of the prescriptions in the separate sciences, gathered here into one group, declined from 90 to 63. In general, the subject that was and is most popular among the prescriptions, English, has decreased the least,—in only two instances. The subject that was and still is least popular among the prescriptions, the science group, has decreased the most, almost one-third.

DR. HARKER: A number of colleges prescribe definitely certain units, six, seven, or eight, in certain definite subjects. Then they say another three or four must be selected from a very few, making altogether, either in wholly prescribed or partially prescribed, some ten or eleven, and only a very few will be general. Has that been taken into account?

DR. FURST: Precisely. It will be shown later, but we may speak of it now. In making this study, we encountered a surprise with which I had hoped to surprise you, but I see that it has been anticipated. It is that the tendency that was observed in 1912 away from almost complete prescription of entrance subjects toward almost complete freedom of choice in entrance subjects, has been checked by the introduction of a practically new kind of requirement which,

for convenience, would have to be called something like alternate prescription or limited elective. That is, instead of saying, "You must have Latin, and mathematics, and physics, and chemistry," a large number of methods of admission, as will be illustrated later on, say, "You must take so many points in English or history; French, German, or Spanish; chemistry, physics, botany, or zoology; and so on. These we have called, for want of a better name, alternate prescriptions. Dr. John's study, which has been referred to, divides all admission requirements into prescribed or elective units. Mr. Kingsley added a third grouping, free units. We have felt the need of a fourth grouping, and use prescribed, elective, free, and alternate units as classifications.

In response to an enquiry concerning vocational subjects, it may be said that there has not been to any great extent an increase among the prescribed alternatives of vocational subjects. Those are apt to be allowed among the units that may be chosen with complete freedom, which, as we shall see later, still make up a part of the requirement for admission, although not so large a part as in 1912.

In response to an enquiry concerning the list of institutions from which these data have been drawn, it may be said that these tables and charts represent the same 125 institutions in 1912 and 1920, the 125 universities and colleges that were on the list of the Association of American Universities for 1918. These 125 institutions happen to have 189 methods of admission both in 1912 and in 1920, but this is a mere accident. The list of the Association of American Universities being a representative list and the Association of American Colleges being a representative body, the data presented would fairly represent the institutions belonging to the College Association. The University list does include state universities, where there is perhaps the maximum of freedom with regard to admissions. It does not, on the other hand, include some of the smaller colleges, where perhaps conservatism would be rather the rule. In general, however, the list and the data from the institutions upon it may

be considered generally representative of the situation and tendencies among our influential institutions.

Table A, once more, and Chart V illustrate the situation with regard to the entire freedom on the part of the student to offer for college entrance any subjects that he has taken in high school, no matter what they may be. The number of methods of admission that allowed some absolute freedom in 1912 was exactly one-ninth of the whole number. In 1920 this number increased to more than one-third of the whole, thus allowing absolute freedom in a certain number of units, saying to the student, "After you have satisfied our other requirements, you may offer anything you have had in your high school, no matter what it is."

This increase has been largely in the group of requirements allowing from five to fifteen units of entire freedom. Few allowed so much in 1912, now a considerable number do so. Eleven requirements allow five units of absolute freedom, eleven requirements allow six units, one allows six and one-half, eight allow seven, one each allows eight, ten, twelve, and thirteen, and three allow fifteen units of absolute freedom. Institutions that allow any entire freedom thus tend to allow a good deal.

At each end of the requirement for admission, therefore, we have a tendency towards relaxation and flexibility. The number of units representing subjects actually prescribed has decreased; the number of units representing subjects that are absolutely free has increased.

Tables A and C and Chart VI illustrate what was to us an unexpected change in the situation with regard to elective units; that is, the number of units that a college allows to be chosen at will from a considerable list of subjects, often a score or more. The number of methods allowing electives has decreased between 1912 and 1920. In 1912 there were 27 methods of admission that allowed no such electives. There are now 40 that allow no such electives. In general there has been no very great change, but such change as there is has been in the direction of a decrease,

the place formally occupied by electives having been taken by alternate prescriptions or limited electives.

Table A and Chart VII display the situation as a whole. The 125 institutions in 1912 taken together demanded units amounting to 2,786; that is, the number of methods of admission that an institution had, multiplied by the number of units in each particular method, and all of them added together. In 1920 the same institutions required 2,834 units. The increase is due quite largely to the general adoption of fifteen units for admission rather than a smaller number. The number of absolutely prescribed units has decreased from $2,025\frac{1}{2}$ to $1,268\frac{1}{2}$. The number of absolutely free units has increased from 101 to a total of $348\frac{1}{2}$. The number of methods of admission allowing electives having decreased, the total number of elective units has increased but slightly, from $659\frac{1}{2}$ to $697\frac{1}{2}$. At the same time the new feature of alternate prescriptions has entered, and now accounts for $519\frac{1}{2}$ units. This change is not only unexpected and interesting, but it would seem at first and after somewhat detailed study a salutary tendency. It allows considerable freedom to the secondary school and to the student, which is desirable, by giving the student a larger range than did the absolute prescriptions. At the same time it does not depart so much from any standards that the college may have, as does allowing absolute freedom in the choice of subject. The change appears to meet both kinds of pressure upon the complicated problem of admission requirements. It continues to hold to certain standards on the part of the college, while at the same time it provides an amount of flexibility in entrance which is desirable for the high school.

Table D and Chart VIII show the alternate prescriptions as they arrange themselves among subjects and numbers of units. The foreign languages are the subjects most emphasized; two or three units the favorite quantities.

It is impossible, because of the detail, to illustrate the various interrelations of these alternate prescriptions for all of the institutions. A score of diagrams were prepared for

the purpose, but no one of them was sufficiently simple for presentation on a screen or on the printed page. The general situation, however, is well illustrated by the comprehensive examinations that are now given in ten institutions, three of them having two kinds of comprehensive examinations.

These comprehensive examinations are illustrative of alternate prescriptions even in institutions that do not use examinations for entrance, because they might require the same list of subjects in the same way, to be presented by means of certificates. Ordinarily the comprehensive examination represents about eight or nine of the units that are required for admission, the whole record being represented by certificates and this limited portion being selected for test by examination. The comprehensive examination is divided into only four parts, so that the student has to take only four instead of a dozen or more tests and may select what he does take with a considerable amount of freedom.

That, of course, is an increase in freedom, and yet an increase in freedom that may be guided by the institutions so that their belief as to what is important shall not suffer.

In these comprehensive examinations the subjects are presented in several ways. An examination may be restricted entirely to one subject, or the student may choose between two subjects, or one of three, or four, or five, or even eight.

Chart IX, illustrating these comprehensive examinations, in the ten institutions that use them, is probably not clear at first glance. It will be found, however, to indicate a number of factors, and their interrelations. Reading the chart from top to bottom, it is striking, for example, to see how much emphasis is given to the field of foreign languages, and next to mathematics and science. Comparatively less emphasis than might be expected is given to English, and very little indeed to history.

Three times Latin is a subject by itself, twice it alternates with Greek. It is found four times in a group of four subjects and five times in a group of eight subjects.

English must be offered as a single subject nine times.

Four times the student is allowed to offer either English or history; once he may take English or foreign language, or history, or mathematics, or science.

With regard to the grouping of the subjects, reading the chart from left to right shows that the subjects which appear as occupying each by itself one-fourth of the comprehensive examination, are Latin, foreign languages as a group, English, mathematics, and any other subject; Latin occurring by itself three times, foreign languages five times, English nine, mathematics four, and any other subject four times. In groups of two alternate subjects we have Greek or Latin, English or history, mathematics or science. In groups of three there are French or German or Spanish; mathematics or chemistry or physics. In groups of four there are history or chemistry or physics or mechanical drawing; Greek or Latin or French or German; Greek or French or German or Spanish; Latin or French or German or Spanish. One group of five and two groups of eight follow.

The colleges arrange these possibilities in a very interesting way.

Mt. Holyoke, Smith, and Wellesley together show a requirement that one of the four parts of the comprehensive examinations be in some foreign language, one in English or history, one in either mathematics or chemistry or physics, and one in any other subject that may be chosen. The arrangement at Goucher College is even simpler, while Barnard College has the simplest system of the group. It requires a foreign language, English, mathematics, and any other subject.

Wells College and the first of the two methods offered by Yale are identical in requiring mathematics, English, Latin; and Greek or French or German or Spanish, a group of four languages where Latin is not included, it having already been included as a single subject.

Harvard, Radcliffe, and Boston University have the most elaborate and hence the most flexible requirements.

May I say, in concluding, that in continuing our study

we shall be happy to receive questions concerning any matters that have been presented here or that have not been presented but are worthy of study.

(Applause.)

THE CHAIRMAN: I know you would all wish me to express to Dr. Furst the gratitude of the Association for his great kindness in presenting these difficult and entangling things to us so clearly. I am glad you should have gotten one instance of the sort of kindly helpfulness that comes from him, to which I have referred.

THE COLLEGE CURRICULUM*

By DR. KELLY.

The material here presented is taken right out of the laboratory. In the office of the Association and the Council of Church Boards of Education numerous studies of college curricula are being carried on and are in different stages of development. The fundamental material of these studies is furnished by the American Education Survey to which reference was made at some length at the last annual meeting of the Association.

As indicating not only something of the method of procedure, but that a consistent policy has been pursued in making the computations upon which the charts are based, the formula in terms of which the graphs have been constructed is given.

The method is yet in its elementary stage. It has been used in graphing approximately 75 cases, and is suggested as a tentative method of procedure. Before anything of finality is reached, about 300 programs covering institutions of all kinds, from all sections of the country, both those

*The charts have been made under the immediate supervision of Miss Lura Beam, Associate Secretary of the Council of Church Boards of Education, who is chiefly responsible for the technique. Other members of the staff and numerous college officials have made valuable suggestions as the work has progressed.

accredited by sectional and national associations, and those not so accredited, should be examined. (The credit allowed for elementary and intermediate Chemistry, for example, should be ascertained by canvassing the practice of a large number of institutions of good standing.)

(For Counting):

1. The measure of comparison is the semester hour, of which 120 to 128 are required for a degree. Term hours, credit hours, points, units, etc., were changed into semester hours.

2. Only courses actually given in the year of the catalog announcement are counted.

3. Only courses for which undergraduates are eligible are counted.

4. Only courses for which credit is specified are counted.

5. Two laboratory hours are counted as one recitation hour.

6. Two hours practical work in Physical Education are counted as one recitation hour.

7. On a sliding scale of credit (e. g., 3 to 4 hours) the lower is taken.

8. Elementary and intermediate work in foreign languages (even when 8, 10 and 12 hours credit are stated) are counted as 6 semester hours per annum.

9. Courses in "Methods" are counted under their respective departments unless they are taught by specialists in the Department of Education.

10. Foreign language courses given in English are classified under "Latin in English," "English," "History," etc., depending on the department offering them.

11. The number of hours given to junior college work and senior college work respectively are recorded.

(Many of the graphs show this difference by shading work for which only juniors and seniors are eligible.)

12. The written record is arranged in the descending order of succession, the department offering the greatest

number of hours in the first place, the next greatest in the second place, etc.

(For Graphing):

13. The department offering the greatest number of hours is put in the center of the graph, the two next in order on either side, and this is followed down through the smallest departments.

14. Twenty-four semester hours are counted as a major; the combined offerings of departments teaching this amount constitute the area of specialization.

We report now upon a study which the Council of Church Boards of Education is making of certain colleges with Congregational affiliations. In the first place, twenty such colleges were selected from those whose data were accessible and comparable; colleges located in Florida, Georgia, Ohio and farther west. From the curricula of these colleges the median curriculum was calculated and constructed. The area of specialization in this curriculum included but seven departments: Latin, Greek, Mathematics, English, Chemistry, Biology and French. That is to say, the median Congregational college advertises a major in these seven subjects only. Not too much importance should be attached to this median curriculum since it included colleges of different stages of development. The fewness of these departments, however, and the fact that for the most part they are what may be called the "old line subjects," immediately attracted attention and led on to further investigation.

In these subjects the emphasis is placed consistently upon the major departments. The fact is not lost sight of that many colleges emphasize their minors which are brought together in groups. Sufficient justification for the present limitation of field is found in the fact that one thing at a time should be done. The question as to the different educational emphases found in the major system and the group system will be referred to later in this discussion and should be subjected to careful study by the Commission another year.

A word of explanation is given as to the meaning of the legends on the charts.

The *hours advertised* is an exact statement taken from the catalog of the college, deducting courses for which credit is not given and courses offered in alternate years as indicated in the formula above.

Hours offered is the exact statement of the institution as to the courses offered, i. e., for which students registered and which were taught during the year for which the study is made. If the amount offered is less than the amount advertised, the degree of difference is indicated by single crosshatching; if the amount offered is greater than the amount advertised, the difference is indicated by double crosshatching.

Semester hours earned shows the quantitative relationship of departments as it is determined by student enrollment. To secure the earnings of each course the number of students in each course is multiplied by the number of semester hours credit granted by that course; the addition of the earnings of all courses within a department results in the total earnings of that department. This departmental product is expressed in horizontal bars applied over the diagram of advertisements and offerings. It is constructed differently from the original diagram to show that it stands not for semester hours advertised or offered, but for semester hours earned by student enrollment. The scale of construction is sixty-four times smaller than the scale for semester hours advertised and offered. The bars are comparable among themselves.

This process has the crudity of all quantitative measurements. It was thought inadvisable to introduce the qualitative measure (i. e., the amount of A, B, C, D, E and F credits) into a study already composed of several elements. It may later be considered in an individual study of that issue alone.

There is no way of showing without a supplementary study, the proportion of subjects prescribed and subjects elected in these particular cases. (The general practice of

American institutions in the matter of prescribed subjects has been reported by the Bureau of Education.*

It must also be observed that the representation of subjects usually known as of junior and senior rank, e. g., Economics and Astronomy, in which ordinarily relatively few students register, will be smaller than that of subjects open to registration in all four years and smaller than subjects taken by the larger numbers of sophomores and freshmen. This difference is more conspicuous in small institutions.

The advertised opportunity for specialization shows the departments in which at least a major (twenty-four semester hours) of work is advertised during the school year under observation.

This study ignores all courses offered in alternate years or more seldom. It was originally meant to ascertain the full offerings of every institution, but the varying practice of colleges in their catalog statements led to confusion in interpretation and resulted in the only method of counting which can be consistently applied without individual correspondence. Manifestly this is a hard measure for the very small college and the struggling department.

*Bureau of Education. Bulletin, 1920. No. 7.

A CONGREGATIONAL MEDIAN COLLEGE

▨ Semestre Hours Advertised By Depts.
 □ Advertised Opportunity For Specialization.

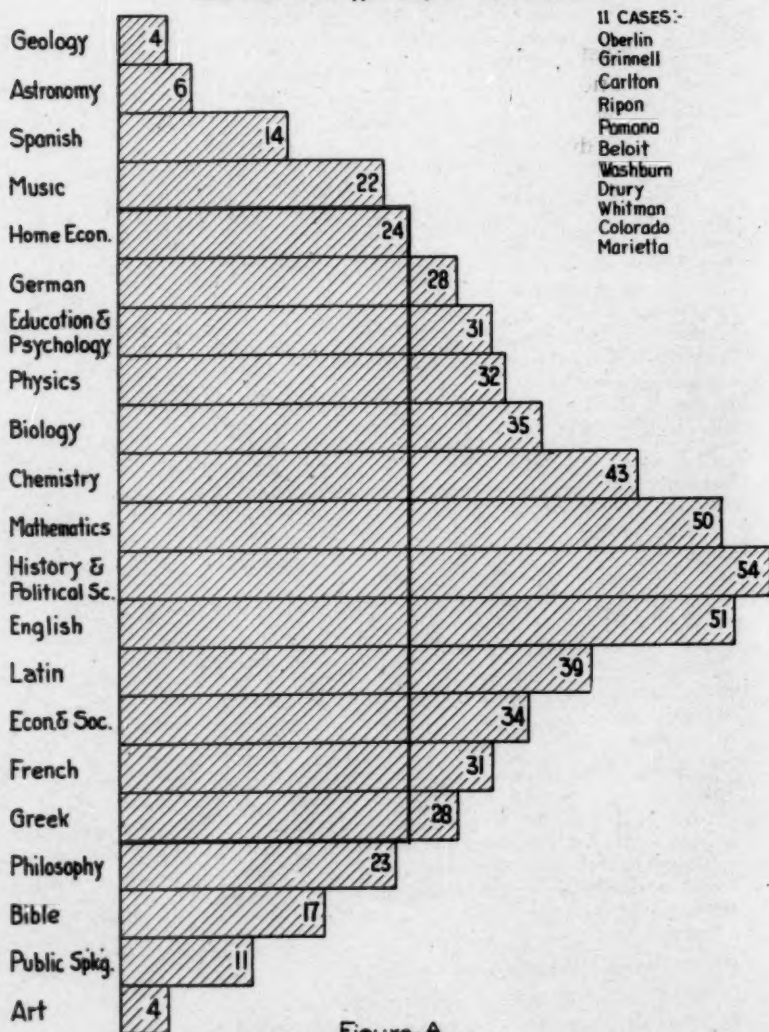


Figure-A

Figure A is the Median Curriculum made up from the catalog announcements of the Congregational colleges on the lists of leading standardizing agencies, except that the data concerning Knox and Middlebury are not included in this chart. This Median Curriculum includes as majors, Home Economics, German, Education and Psychology, Physics, Biology, Chemistry, Mathematics, History and Political Science, English, Latin, Economics and Sociology, French and Greek. Perhaps this might be called the administration's idea of what a standard college curriculum ought to be, or of what a standard college ought to be prepared to offer to its students. At least, this is the Median of what is announced in the several catalogs.

All the subjects in the first list given are included but the list as a whole is not so definitely restricted to subjects which may be called disciplinary or cultural.

In this Median college opportunities are announced for majoring in two ancient and two modern languages and in five sciences (including the ancient subject, Mathematics, and the modern subject, Home Economics). It is noteworthy that History and Political Science stand first in the number of hours offered, and that Education and Psychology and Economics and Sociology are included among the majors. It is equally interesting that Philosophy falls somewhat short of a major as does Music, while less than a minor is offered in Bible, Public Speaking and Spanish. A total of twenty-one departments are announced.

This medium of institutions of a specific group is subject to all the difficulties of combining not exactly similar things. These institutions have their idiosyncracies. History and Political Science were combined to carry out the practice of the greater number of cases. If they were not so combined, English would be the core of the curriculum. If they were cut apart, there would remain a major in History: Political Science might in some cases have to be buttressed with Economics or Sociology to make a full twenty-four hours' work in any given year. The two latter departments, generally restricted to the junior and senior years would not, if separated, make potential major subjects. There would, however, be enough of their point of view adequately to broaden any allied subject and hence make a unit.

In the same way, if the Education and Psychology were cut apart, a major in Education would remain but not one in Psychology. Psychology, if grouped with Philosophy would make a major in that department. The work in Home Economics just achieves twenty-four semester hours by the inclusion of all the work in Methods of that department. It would not reach it on technical work alone.

The work in Music might very possibly be a major subject if all institutions definitely announced their full credit.

There would surely be a median minor in Bible if courses given in alternate years were included, but this measure is omitted for every institution and every department.

A COLLEGE OF 700 STUDENTS

Semestre Hours Earned By Departments.

1919 - 1920

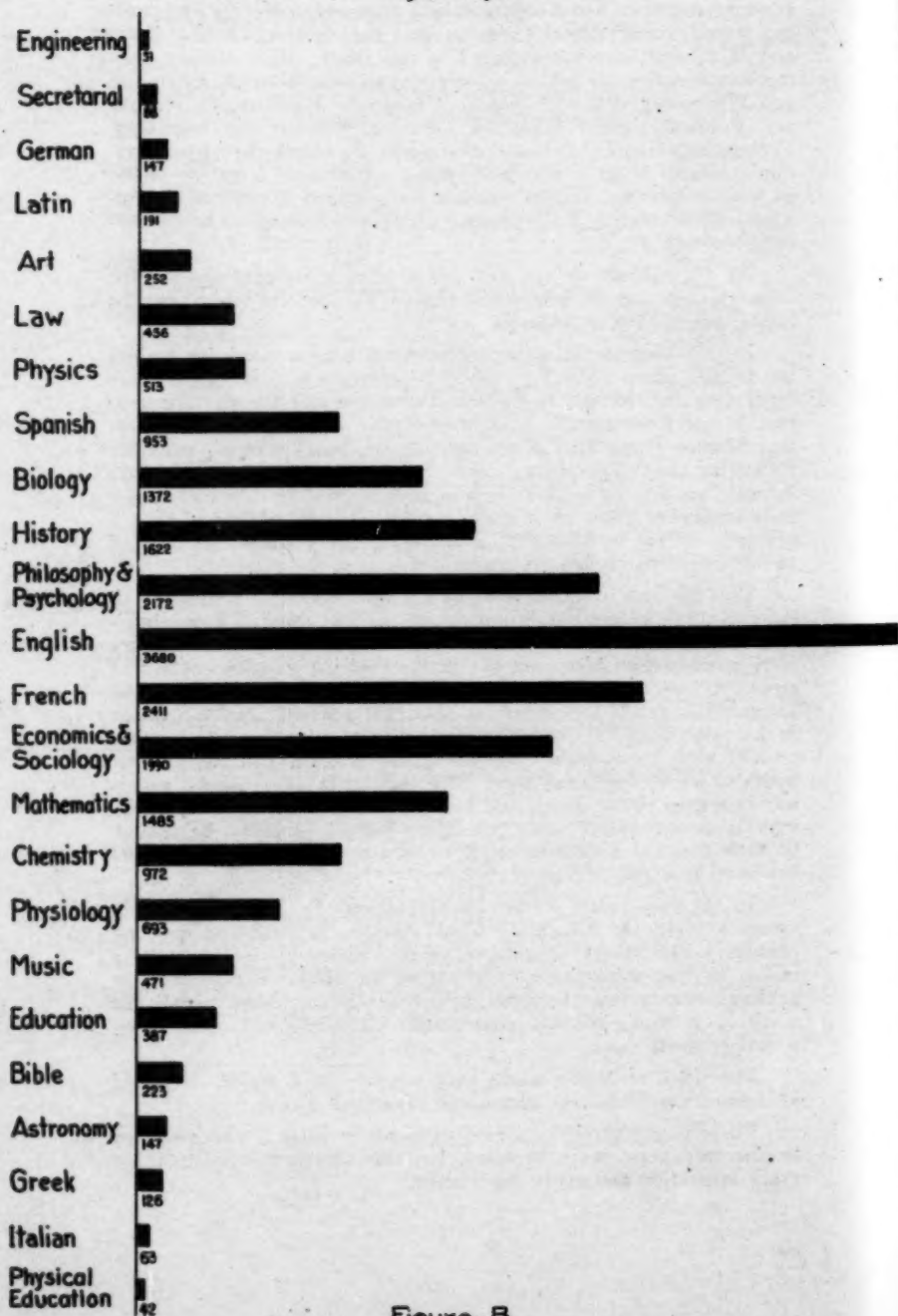


Figure-B

FIGURE B

This figure shows only the semester hours earned in the several departments of a coeducational college of 700 students. English leads all other departments, with French second, Philosophy and Psychology, Economics and Sociology, History, Mathematics, Biology, Chemistry and Spanish following in order.

The total semester hours earned in these nine departments is 16,657 as compared with 3,850 in fifteen other departments. This is a striking illustration of the tendency toward concentration in student election and raises anew the question as to whether the tendency of many curriculum builders toward horizontal spreading is economically or educationally justified.

Not only does this chart show the tendency toward concentration in hours earned by students but also the tendency toward the modern socialized subjects in the curriculum. Of the nine leading departments, only two, Mathematics and Philosophy, belong to the traditional college course.

A COLLEGE OF 1000+ STUDENTS

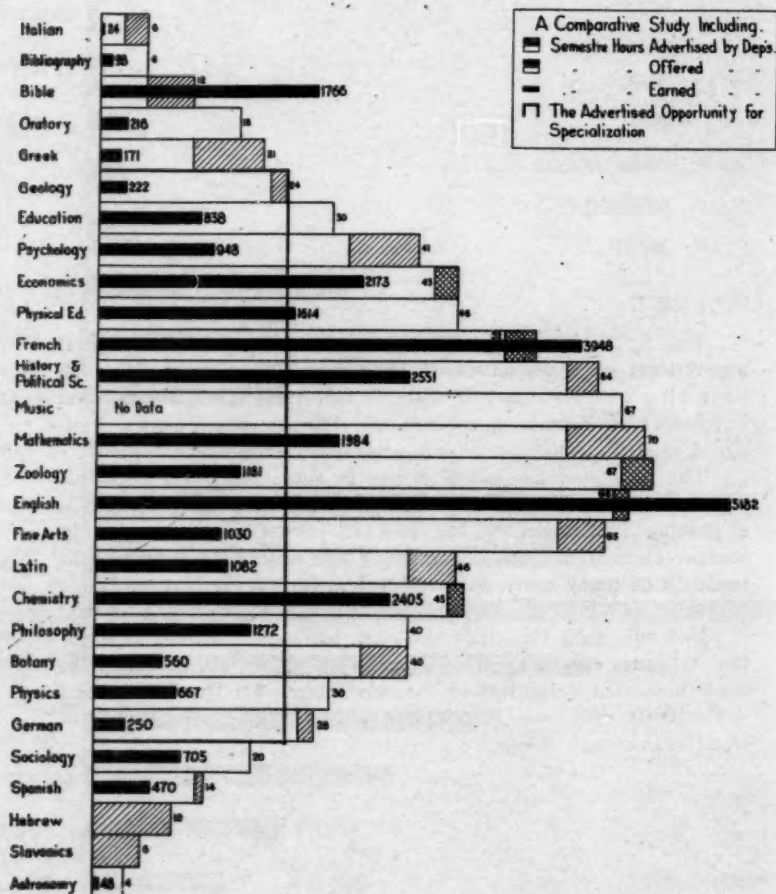


Figure C

Of the eighteen major departments, six, at least, offer a double major of work or more, and all but two offer at least a major. (Music data not available.) In Economics, French, Zoology, English and Chemistry more work is offered than advertised. In Greek, Hebrew and Slavonics only is there any marked discrepancy between work advertised and offered. English leads in hours earned and is followed by French, History and Political Science, Chemistry, Economics, Mathematics and Bible. Of the hours earned 27,907 are within the area of specialization, and only 3,498 without this area. Of this number more than half, 1,766, are in Bible.

This is a coeducational college.

A COLLEGE OF 400 STUDENTS

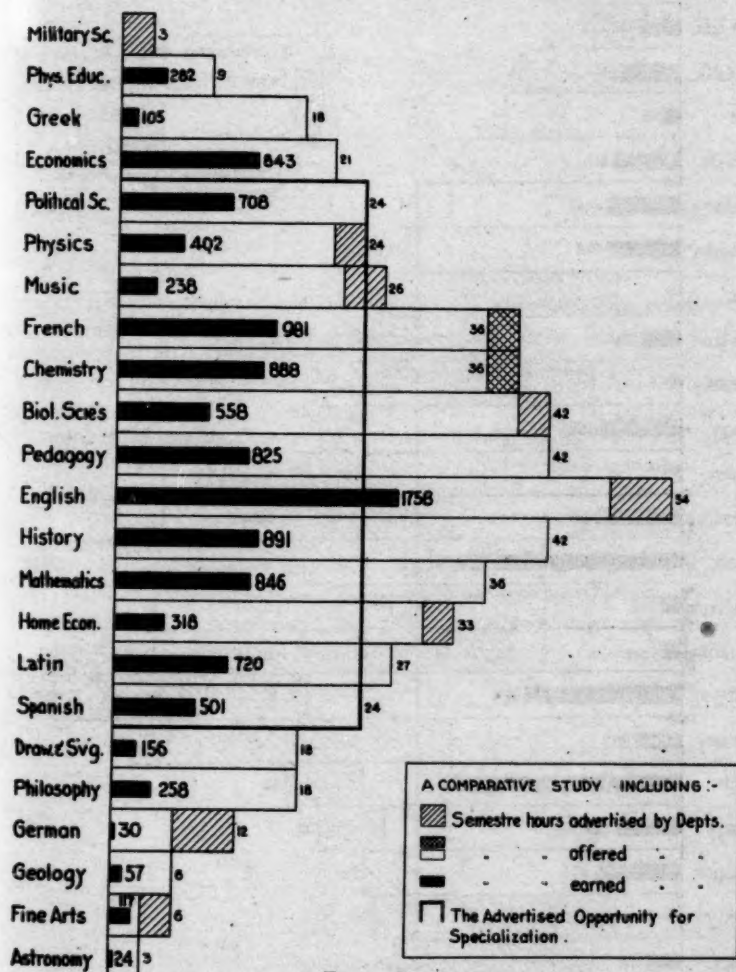


Figure-D

A coeducational college which has evidently found its task, there being a remarkable correspondence between the work advertised and offered. In all but two of its advertised majors a major or more of work is offered. In two of its majors more work is being offered than advertised: in six they exactly correspond. Of the thirteen majors two only are from the traditional curriculum. English stands first in semester hours earned. Nearly all of the majors are strong in this particular. The accidental juxtaposition of hours earned in Greek and Physical Education is interesting. Both departments are on the elective basis.

A COLLEGE OF 400 STUDENTS

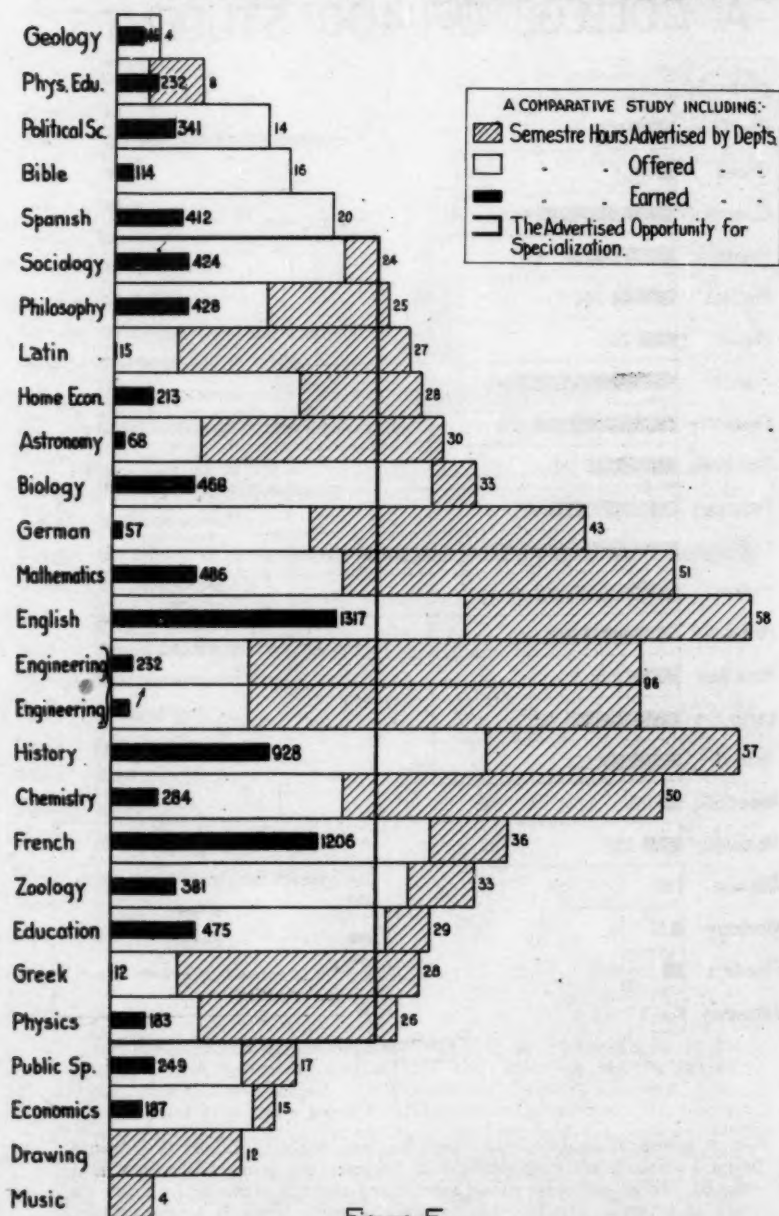


Figure-E

FIGURE E

Another coeducational college of 400 students. This college announces eighteen major departments, including the traditional subjects, Philosophy, Latin, Greek and Mathematics. Of the eighteen, six only offer a major's work. In eight of the eighteen major departments not half of the work advertised is offered. Of the total number of major courses advertised slightly more than half are offered. Only one subject—Spanish—is advertised as a minor. In this subject as in Bible and Political Science all the work advertised is offered. In the catalog advertisement Engineering is included as a department of the college and not as a separate school. It shows the greatest discrepancy between advertisement and offering. Note three distinct groups of major departments. If in this case, as in some others, Zoology had been grouped with Biology, the hours earned in Biology would have reached nearly to the earnings of the first departmental grouping.

A COLLEGE OF 300 STUDENTS

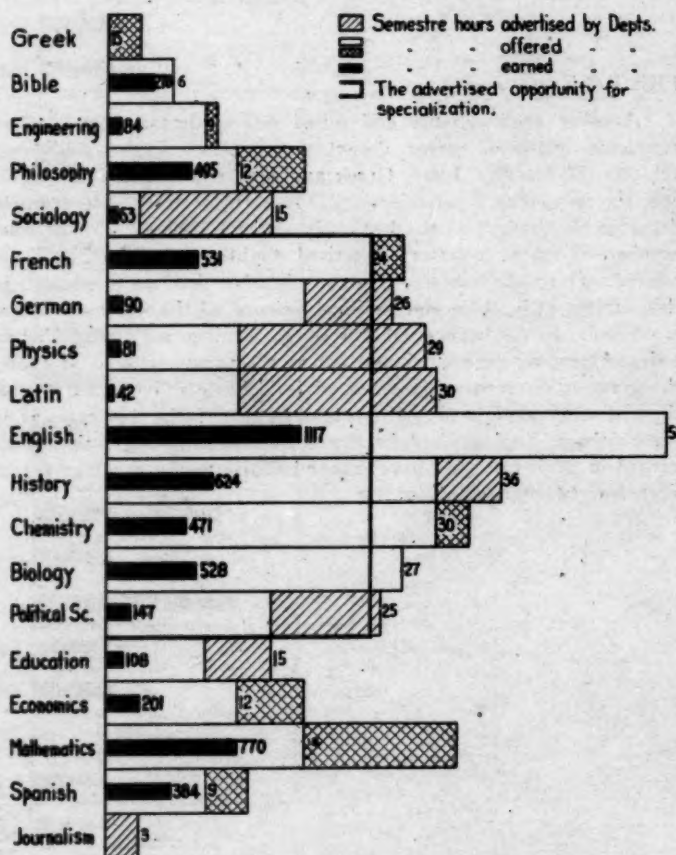


Figure-F

FIGURE F

Figure F gives four types of information, as indicated by the legend, concerning a coeducational college of 300 students. A major or more of work is advertised in the catalog in nine departments, English assuming the central place with fifty-one semester hours. Within the area of specialization the curriculum is strikingly modern.

Mathematics does not appear among the advertised majors although in student hours earned it is second only to English.

In English and Biology the courses offered exactly correspond to the courses advertised. In French and Chemistry more courses are offered than are advertised in the catalog. In all other major departments the offerings fall short of the announcements, in Physics and Latin notably so.

Among the subjects in which a major is not provided for in the announcements more courses are offered than advertised in Greek, Engineering, Philosophy, Spanish, Mathematics and Economics; indeed, more courses are offered in the sub-major subject Philosophy than in the major subjects Physics and Latin.

In the matter of semester hours earned, English stands first, Mathematics, announced as a sub-major, second, and History, French and Biology in order. In proportion to the number of hours advertised more semester hours are being earned in Bible than in any other subject in the curriculum.

The advertised area of specialization includes nine departments. Of these, five only, French, English, History, Chemistry and Biology, are within the area of specialization measured in terms of hours earned. Add to these Mathematics, and you have a college of three hundred students specializing in five departments, although courses are being offered in eighteen departments.

A COLLEGE OF 100 STUDENTS

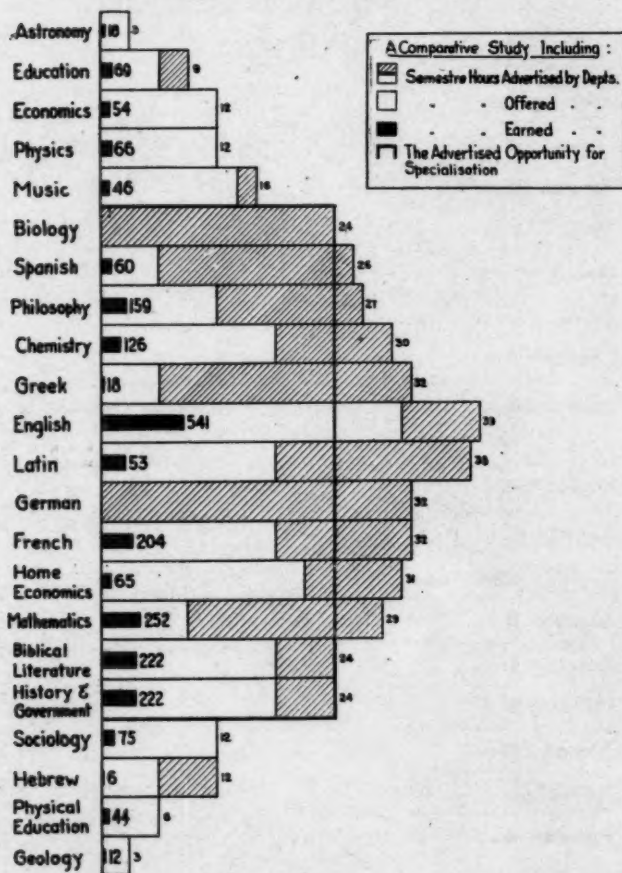


Figure-G

Thirteen major departments are advertised; a major's work in English only is offered. No minors are announced, but the equivalent of a minor's work is being offered in seven major departments. Students register to the limit of the announcements in Economics, Physics and Sociology. English leads in hours earned, followed by Mathematics, Biblical Literature, History and Government and French.

The Professor of Biology is on leave. The A. B. degree requires six semester hours in History and Government, Biblical Literature and Mathematics, and this fact is reflected in the hours earned in these departments. The college announces that it wishes especially to serve a rural field.

A COLLEGE OF 65 STUDENTS

(RURAL, MIDDLE WESTERN)

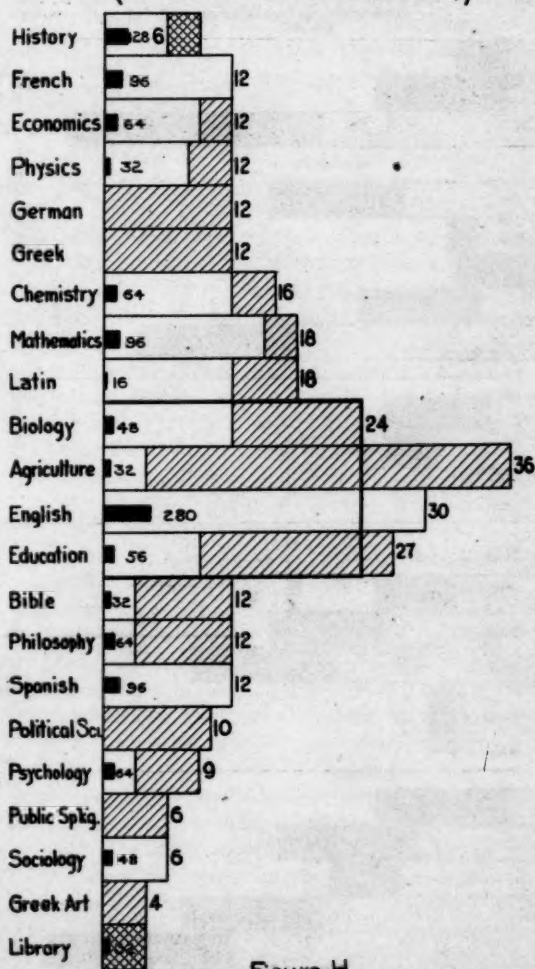


Figure-H

This is a small college with only four majors announced. There is an apparent effort to adapt the major courses to the local agricultural constituency, but the department of English alone offers all its advertised courses. In practice more work is offered in the minors than the majors (English excepted). In French, Spanish and Sociology the students take all the work advertised; in History and Library Science, more than the work advertised. The institution in hours earned is more nearly a junior college than a standard college.

A COLLEGE OF 700 STUDENTS

Distributed in terms of courses and semestre hours
between Social, Cultural, Professional and Scientific Training

■ Senior College Courses
▨ Junior
— Opportunities for Specialization
1937-1938

UNIT:
□ One Semester
□ Half

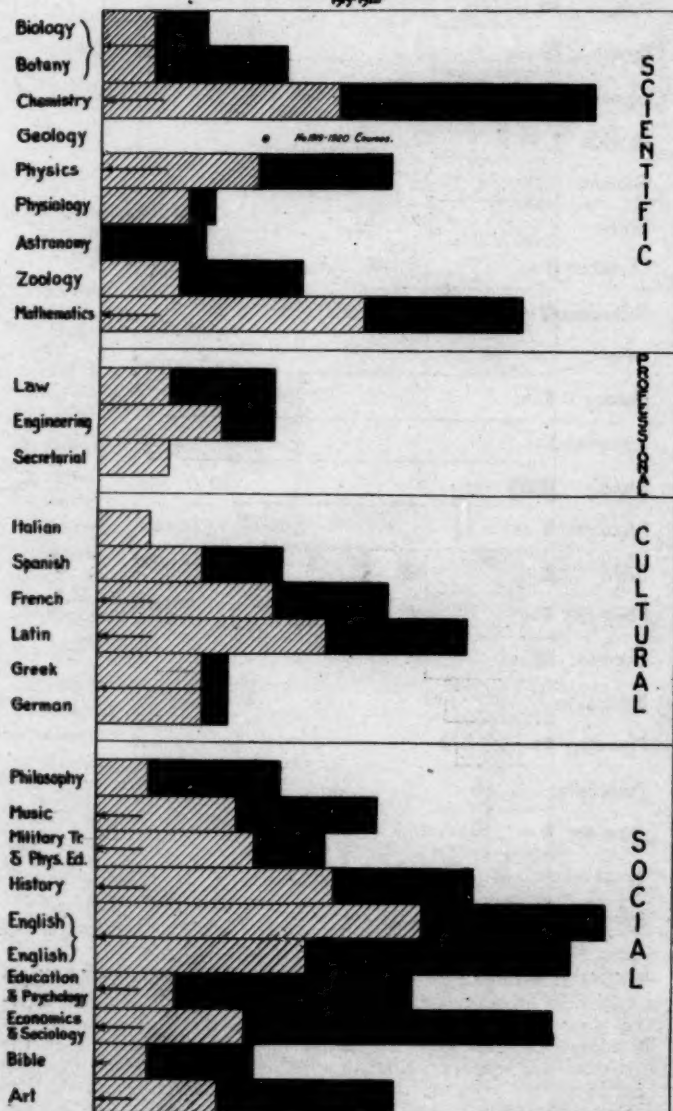


Figure 10

FIGURE K

Figure K shows functional tendencies as well as quantitative differences. Horizontally the subjects are arranged in groups; perpendicularly the difference is shown between junior and senior college work. (Junior college work is work advertised for freshmen and sophomores; senior college work, that advertised for juniors and seniors.)

In cases where the college does not specifically state the distinction, the course is allocated according to standard current practice.

The college advertises majors in four sciences: Biology, Chemistry, Physics, Mathematics; in two languages: French and Latin; and in seven subjects not so easily classified: Music, Military Training and Physical Education, History, English, Education and Psychology, Economics and Sociology and Art. No major is advertised in the professional group. If the sciences and foreign languages may be termed *cultural* and *disciplinary*, the other subjects *social* and English both, there is a perfect balance between the two motives, English being the core of the entire curriculum.

It is impossible, of course, arbitrarily to assign a subject to one of the above classes. The qualitative element of instruction is an important determinant. However, elementary work in foreign languages and in such sciences as Chemistry, Biology and Mathematics could scarcely be referred to as having social value. The same statement applies to Art and Music in their elementary forms, especially elementary practicum. In general the large amount of junior college work included under the sciences and foreign languages of itself justifies the classification given.

There is also an approximate balance in amounts of junior and senior college work advertised. Astronomy is the only subject in which all the work advertised is of senior college grade. The largest relative proportion of junior college work is in the language group. The catalog offers elementary language work for college credit in six different languages with apparently no discount on the credit.

This is the same college as that shown in chart B. A comparison shows that the heaviest enrollment of students is in major subjects, although Physics, Latin, Music, Physical Education and Art drop out of the preferred class and the minor Spanish comes to the front.

This college states in the catalog its aim "to prepare its graduates for special distinction in whatever later callings they may choose."

1918 - 1919 1919 - 1920

36

In spite of the danger incident to interjecting judgments into measurements and the other danger of appraising means of accomplishment while the ends are still under discussion, we report an effort to balance certain intellectual values of a few undergraduate departments.

These values are: first, the theory and content of a subject, including its historical development; second, its mechanics and technique from the most elementary to the most advanced form taught in college; third, the senior college courses which stress intensive work in narrow and highly specialized fields; fourth, the amount of application possible or desirable. No theoretical proportion is suggested for any case.

The departments selected for illustration, all offering courses for the full four years, are English, Foods and Nutrition, and Physical Education.

In Chart M an attempt is made to set forth this functional distribution of the content of certain departments of English. In the case of the college of eleven hundred students it is shown that approximately the same number of hours are devoted to the *theory, technique, intensive study* and *application* of English. The amount of time devoted to the mechanics of English is noteworthy in view of the heavy English requirements for entrance. The phase of theory and content is covered moderately. There is in the senior college courses copious material requiring intensive work. The most striking feature of this college's offerings is found in the field of *application*. This institution has a theatre in which types of original work are presented by student casts.

The college of eight hundred students has a fairly well balanced program with relative emphasis on intensive study. Application is confined to the two fields of journalism and teaching.

The college of three hundred and fifty students has a rather modest English program with scant attention to application and a year's work in technique.

The college of five hundred students emphasizes

TECHNICAL COURSES IN HOUSEHOLD ARTS

Chiefly Food, Nutrition and Household Administration.

Distributed By Function :-

- 1.- Theory Content
- 2.- Mechanics, Technique
- 3.- Intensive Senior College Courses
- 4.- Application

INSTITUTION I. (One Department)				INSTITUTION II. (Two Departments)				INSTITUTION III. (One Department)			
Theory Content	Mechanics Technique	Intensive Senior College Courses	Application	Theory Content	Mechanics Technique	Intensive Senior College Courses	Application	Theory Content	Mechanics Technique	Intensive Senior College Courses	Application
Dietetics	Cookery	Special Problems	Practice on Demonstration	Technology of Cookery	Cookery	Elements of Technical Problems	Practice in Domestic Cookery	Food Problems	Cookery		
Food and Nutrition	A	Lunch Room Management		Lecture Demon. in Cookery	Principles of Cookery	Home Cookery and Table Service		Nutrition	A		
Dietetics in Soc. Service	B	Institution Management		History of Cookery	Applications of Principles of Cookery	Lecture Demon. in Cookery	Catering		Prep. of Meals		
House Planning	Caterers (Hotel) Restaurant House			Food Supply	Principles of Home Cookery and Table Science	Large Quantity Cookery	Field Work in Dietetics		Lunch and Cafeteria		
Household Admin.	Planning			Food of Nutrition & Dietetics	Table Service	Introduction to Investigation	Nutrition or Food Economics		Cookery (Home)		
Dietetics (Non-Acad.)	Household Management			Dietetics	El. Hospital Cookery				Household Management		
	Marketing			Nutrition	Large Quantity Cookery	Investigation			Marketing		
	Cookery (Hotel) (Restaurant) (Institution) (House) (Non-Acad.)			Nutrition & Food Econ.	Cookery for Hospitals						
	Laundrying					Laboratory Methods in Nutrition					

* Credit not stated.

Figure 13

theory and intensive study. Nothing appears under the head of application.

The possibilities of departments of French may be tested in the same manner and will be found to graph very much as do departments of English. Two important questions raised by the visual presentation of the facts are "How much work in mechanics and technique should be given for college credit?" and "Is it profitable to give in college modern language work which hardly goes beyond training in mechanics and technique?" Bryn Mawr College settles this question in its own case by giving no elementary and intermediate courses for credit. Various colleges meet the problem by giving one elementary course for beginners, one for entrants presenting two units and one for entrants with three units. This presents the philosophy of the issue with cruel distinctness to the small college offering such an assortment of work as elementary and intermediate French, History of the Drama, Old French and Teaching of French.

Figure N illustrates two institutions giving the B.S. degree for technical work in their Schools of Home Economics and one college of liberal arts offering a major in that department which leads to state certification of teachers.

The three departments are not comparable for this reason and for the fact that Institution II illustrates a combination of the departments, Cookery and Nutrition. The work in Nutrition is added to illustrate the possibilities of cross election in an institution offering Home Economics on this scale. It furnishes a background entirely different from that which the liberal arts college commonly supplies. It is not intended to suggest that a student could major in both departments.

Institution I offers comprehensive training in many branches of Home Economics.

Institution II offers very ample work in technique. It covers half a dozen phases of cookery. The theory and content phase goes liberally into the undergraduate fields of

Distributed By Function

In Courses And Semester Hours

1. Theory Content
2. Mechanics, Technique
3. Intensive Senior College Courses
4. Application

A four year course leading to the B.A. degree and a Special Diploma

Intensive

Theory Content	For women			Application
	Theory of Play & Games	Elem. Gym.	Pract Work Teaching Phys Edm	
		Adv. Gym.		
		Gym.		

	El. Gym	Phys. Ed. & Danc.
	Adv. Gym	Pract. Wk. & Ind.
Anatomy	Adv. Phys. Ed.	Recreat. Wk.

FOR VIEW

and Teaching •

Credit not designated •

A four year Technical Course leading to the B.S. degree and the professional diploma

Theory Mechanics

	Content	Technique	Senior Coll. Courses	Application
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Hygiene Gen. & Pers.	Physical Tr. A	Recreation Social Centers	Adaptation to Adversity
Hygiene Gen. & Pers.	B		
First Aid	C	Advanced Practice	Teaching of Hygiene & Phys. Ed.
Anatomy	D		
	Formal Gymnastics	Technic of Singing Instruction Childhood Play Playgrounds & Community	Experiment Playground Practicum
Applied Physiology			
History of Phys. Ed.	Dancing & Athletics		
Kinesiology			

A five year course leading to the B.A. degree and the certificate of the Dept. of Hygiene

Theory Mechanics Intensive

[illegible]

Normal Instruction	Prac. Tchg	Self-assembly	Practical Dem.
Kinesiology			
Strength & Conditioning			
Hygiene			
Theory & Methods			
Tr. Plan Gr			
Anatomy			
Play & Games			
History & Lit.			
Massage			
Recreative Gym			
Dancing			
Outdoor Sports			
Horseback Riding			
Swimming			
Health Problems			
Gymnasium			

Not counted toward degrees
Credit not easily counted may
be too liberal.

nutrition and dietetics and is greatly amplified by the additional special adaptation of work prescribed under the department of Chemistry. The intensive work of the senior college year goes into technical problems involving advanced laboratory methods, together with work in application requiring practice in several fields.

Institution III gives a rather simple group of subjects, apparently almost those which might be valued by any woman in the administration of her own home.

Figure 0 can only suggest current practice in Physical Education in institutions of different aims:

The institution giving a technical course centering on this major interest (together with the English, History, Science and Modern Language of the ordinary junior college years and some prescribed work in Music) gives a great amount of theory. A profession which must be prepared for chiefly in the college years, without special high school training as an entrance requirement, must of necessity also give a great deal of mechanics and technique. All the intensive senior college courses have specific reference to application.

The institution giving the five year course has built a less exclusively professional program. Its work is rather more like that of a departmental major. It does not go into intensive fields, but gives a modest amount of work in theory and health amplified by instruction in games, sports, some elementary work in correctives and the conventional work in application.

Work in swimming, dancing, outdoor sports and horseback riding is not counted toward the degree. The credit hours are hard to count in this institution and the estimates may err on the side of liberality.

The remaining institution stresses predominantly the side of theory and content. Such terms as "Physical Training" and "Elementary Gymnasium" are large enough to cover all kinds of practice on the side of mechanics and technique.

PRINCIPLES AND TENDENCIES

Certain tentative conclusions may be stated here chiefly for the purpose of focusing attention upon questions more or less vital in the organization of the college curriculum.

1. There is without doubt a *persistence of certain traditional subjects in the catalog announcements*. No longer do these colleges announce Mental or Moral or Natural Philosophy or Metaphysics or even Logic as an unrelated subject. Philosophy, however, appears in every catalog announcement covered by this study although rarely as a major department of itself. In most instances in which there is a major in Philosophy the department includes either Psychology or Education or both.

Hebrew has almost vanished from catalog announcements. One college only among those charted advertises Hebrew and this college did not offer it during the year covered by the study.

Greek is found as an advertised study on every chart. It is a major department in the median curriculum. When it comes to hours offered and especially to hours earned, Greek is almost negligible, although one institution offers more than it advertises. Where Greek makes a stronger showing, it is usually bolstered up by a college requirement.

Latin is usually included within the announced area of specialization, although it attains the major standing in hours offered and earned, only in the college with 1,000 students and in a college in which Latin or Greek is required. Other traditional subjects such as Mathematics, History and Chemistry not only persist in the announcements, but rank high in student preference. History and Chemistry, of course, are traditional in name rather than content.

2. There is a marked *tendency toward student registration in the modern subjects*. English is uniformly the core of the curriculum. French ranks second in a surprising number of cases, its relative position as a foreign language being due undoubtedly to the war. The other subjects which colleges offer freely and which students prefer

are Chemistry, as indicated above,—another war product, no doubt—History, especially when linked with Government, and Political Science, Economics and Sociology, Philosophy (coupled with Psychology or Education) and the biological sciences. Mathematics is mentioned last, not because it falls in the last place—it is usually among the three or four preferred subjects—but because it is not “modern.” It is the most striking instance of the persistence of a traditional subject.

3. There is a tendency toward *horizontal spreading in curriculum building*. The typical college administrator continues to think of his institution as an omnibus. The prevailing ideal still is “to teach,” or at least, to advertise in the catalog, “every thing useful in creation.” This tendency is not so marked with the Congregational colleges which are among the educationally conservative groups; in this respect they are not typical. Their leaders stand for the integrity of the four years’ college course, for the liberal college of arts and sciences, for the “New England” type of American education. And yet, even here, we find a good many departments. The total number of departments of the median curriculum is 21, of the college with 1,000 students 28, of one of the colleges of 400 students, 27, and of the colleges with 100 and with 65 students, 22 each.

4. This tendency toward horizontal spreading is all the more striking when compared with the decisive *tendency toward concentration in student elections*. This has been covered by implication in the paragraph on student registration in the modern subjects. But the full significance of the tendency toward concentration was not stated there. In the college of seven hundred students which advertises twenty-four departments, the great bulk of the student registration is in nine departments. In one of the colleges of four hundred students the enrollment is chiefly in six departments. The college of three hundred students has only five departments within the area of specialization expressed in terms of student registration. In general it may be said that the stronger colleges have relatively slight

enrollment without the area of specialization. In each case, from the quantitative standpoint alone several departments could be omitted without serious interference with the work of the college.

Of course, it is not ordinarily desirable to eliminate departments only because they do not "pay" as a department store might do. It is possible to be guided by the principle of "major and service lines of work" laid down by the Bureau of Education.*

Furthermore, these charts seem to point to certain departments as major lines of work and others as service lines of work in the college of liberal arts and sciences in accord with this principle. In ten strong Congregational colleges the media of six departments in which most students are registered, in order are English, French, History and Political Science, Mathematics, Economics and Sociology, Chemistry. In ten of the weaker Congregational colleges the media of the six in order are English, History and Political Science, French, Chemistry, Mathematics, Education and Psychology. These are the same subjects in slightly different order with Education and Psychology taking the place of Economics and Sociology in the latter list. In the college of seven hundred students there is a slight variation only: English, French, Philosophy and Psychology, Economics and Sociology, History and Mathematics.

5. It is certain that the whole subject of *college credit for beginning and intermediate work* should be carefully canvassed. There is at present great variation in the practice of excellent institutions in this matter. Many factors enter into the problem. The discussion of this point must necessarily be postponed.

6. There is also an approximate balancing in the catalog announcements of what Dr. Osler referred to as the *old humanities and the new science*. An analysis of this

*U. S. Bureau of Education, Bulletin 1916, No. 19, p. 50 ff. No. 26, p. 102 ff.

situation is given somewhat in detail in connection with Figure K. If one runs through the successive "areas of specialization" he will note the presence in about equal proportions of those subjects which are usually defended as of cultural and disciplinary value and those of social content and motive. Here again, however, the student registration interferes with this ideal balancing. As already pointed out, Mathematics is in practise the disciplinary subject *par excellence*, although the predominantly elementary science and language work followed in most colleges must be classified as of personal rather than social value. The disposition of college authorities is to provide both for the arts and the sciences, not to make a college with undue emphasis on either group of studies.

7. Closely akin to this point is the manifest effort in some cases to *adjust the curriculum to the constituency*. One small college with a rural constituency advertises such an adjustment in the catalog, but the students register without reference to the catalog plan. Another small college with a rural constituency advertises thirteen major departments and the students elect a major of work in one of them. The subjects chiefly taken in this college are English, Mathematics, Biblical Literature, History and Government, Philosophy, French—no striking irregularities here! As already pointed out, the same subjects are elected in the strong and the weak colleges. This may be contrasted with the enrollment in the large colleges of New York City, for instance, which is overwhelmingly vocational.*

8. A more serious fact is that not much progress has been made or effort expended in *adjusting the curriculum to the college resources*. The weak and struggling college announces about as many departments as the strong and well equipped college. Undoubtedly in many colleges much

*Columbia requires of all freshmen a 5 hour course in *Contemporary Civilization*, and the College of the City of New York requires a course of senior college students on *American Civilization*.

work is advertised which could not possibly be offered if by some unexpected turn of the wheel of fortune students should register for the work. Some of the offerings of colleges, furthermore, are on false assumptions as to cost of instruction. It is not more economical to maintain a Professor of Latin with small classes than a Professor of Chemistry with large classes. In the studies of the cost of the student clock hour at the University of Washington* it was shown that in that institution Latin and Greek were among the most expensive subjects to teach and the sciences the most economical. No college studied would profess that it had adjusted its curriculum entirely to its resources. Few colleges or even standardizing agencies have seriously faced this problem. Attention is called to "Administrative Suggestion" number six of the Regents of the State of New York, effective July 1, 1920—"The curriculum should have justifiable relation to the resources of the institution."**

*U. S. Bureau of Education, Bulletin 1916, No. 26; U. S. Bureau of Education, Bulletin 1919, No. 15.

**Regents Rules, Section 24 and 400-c.